

Figure 1

1. Generate Ensemble

20,000 conformational states

2. Calculate Gibbs Energy

20,000  $\Delta G$  values

3. Identify  $\Delta G$ s of Binding Competent States

"a" bc  $\Delta G$ s "20,000-a" non-bc  $\Delta G$ s

4. Modify bc  $\Delta G$ s

"a" bc  $\Delta G^*$ s

5. Form two sets of  $\Delta G$  values, with and w/o ligand. Compute probabilities

20,000  $\Delta G$ s + ligand  
bc  $\Delta G^*$  non-bc  $\Delta G$ s

20,000  $\Delta G$ s - ligand  
bc  $\Delta G$ s non-bc  $\Delta G$ s

6. Calculate stability Constants

20,000  $P_s$  + ligand  
bc  $P_s^*$  non-bc  $P_s$

20,000  $P_s$  - ligand  
bc  $P_s$  non-bc  $P_s$

7. Compare  $K$  values and select affected residues

$n$   $K$  + ligand  
 $K_s$

$n$   $K$  - ligand  
 $K_s$

8. Create and display model.



FIG. 2

Figure 2

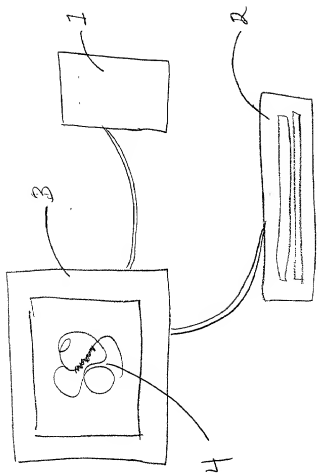


Figure 3

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